

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0877159912](#)  
**Status:** **Active**  
**Overview:**  
**Description:** 1.00mm (.039") Pitch, PCI Express\* Connector, 164 Circuits, Nylon 4/6 Glass-filled, Black Housing, Copper Alloy, 0.76µm (30µ") Gold (Au) Plating, with Beveled Metal Pins, 2.54mm (.100") Solder-tail, Lead Free

**Agency Certification**

CSA	LR19980
UL	E29179

**General**

Product Family	Edge Card Connectors
Series	87715
Comments	PCI 16 lanes
Component Type	Edgecard to PCB
Overview	pci_express_card_edge_connector
Product Name	PCI Express*

**Physical**

Circuits (Loaded)	164
Circuits (maximum)	164
Circuits Detail	All Signal
Durability (mating cycles max)	50
Entry Angle	Vertical (Top Entry)
Flammability	94V-0
Keying to Mating Part	Yes
Material - Plating Mating	Gold
Material - Plating Termination	Tin
PC Tail Length (in)	0.100 In
PC Tail Length (mm)	2.54 mm
PCB Locator	Yes
PCB Retention	Yes
PCB Thickness Recommended (in)	0.062 In
PCB Thickness Recommended (mm)	1.60 mm
Packaging Type	Tray
Pitch - Mating Interface (in)	0.039 In
Pitch - Mating Interface (mm)	1.00 mm
Pitch - Term. Interface (in)	0.039 In
Pitch - Term. Interface (mm)	1.00 mm
Plating min: Mating (µin)	30
Plating min: Mating (µm)	0.76
Plating min: Termination (µin)	100
Plating min: Termination (µm)	2.50
Polarized to Mating Part	Yes
Temperature Range - Operating	-55°C to +85°C
Termination Interface: Style	Through Hole

**Electrical**

Current - Maximum per Contact	1.1A
Voltage - Maximum	50V AC (RMS)/DC

**Material Info**

**Reference - Drawing Numbers**

Packaging Specification	PK-87715-205
Product Specification	PS-87715-200

**EU RoHS**  
**ELV and RoHS**  
**Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free**  
**Status**  
**Not Reviewed**

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**  
[87715Series](#)

**Mates With**  
 PCI Express Card

Sales Drawing  
Test Summary

SD-87715-211  
TS-87715-211

\* PCI Express is a registered trademark of PCI-SIG®

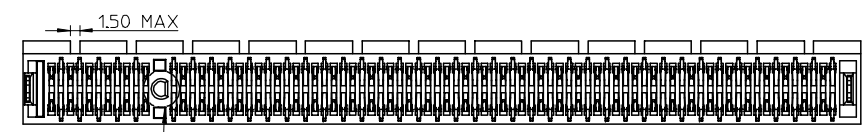
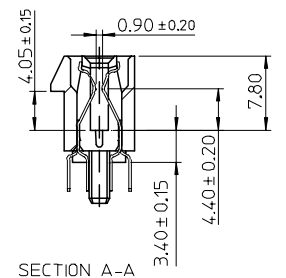
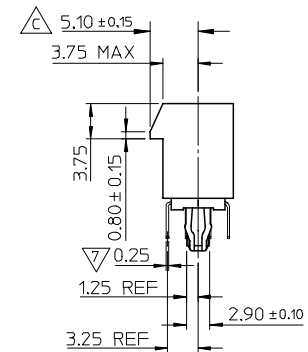
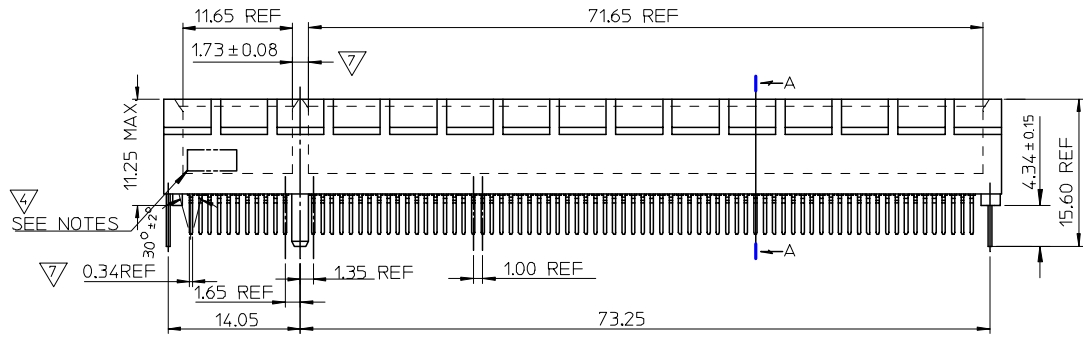
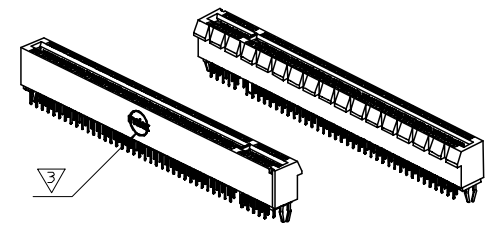
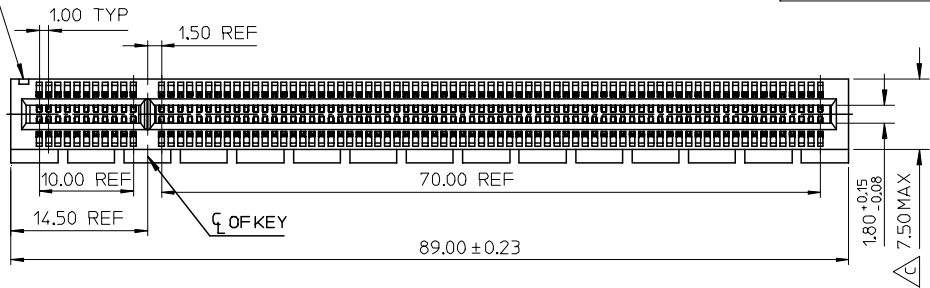
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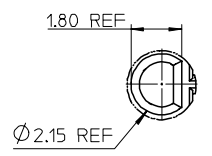
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PART NUMBER	DIM A	CONTACT AREA PLATING OPTION	SOLDERTAIL PLATING OPTION	PROT SIZE	TOTAL CKTS SIZE
87715-9912	2.54	30 MICROINCH MIN. GOLD	100 MICROINCH MIN. TIN OVER NICKEL PLATED OVERALL	16	164
87715-9913	3.00	30 MICROINCH MIN. GOLD	100 MICROINCH MIN. TIN OVER NICKEL PLATED OVERALL	16	164

PIN #A1 IDENTIFIER



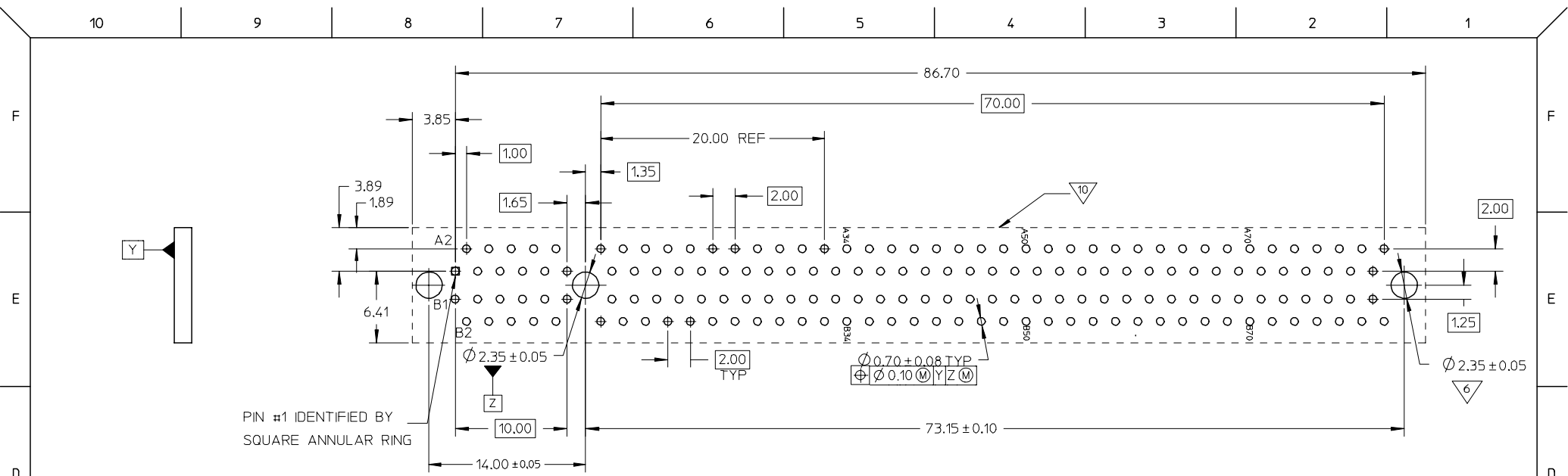
SEE DETAIL 1



DETAIL 1

REVISED DRAWING EC NO: SH2006-0769 DRWN: ALLIN 2006/05/30 CHKD: 2006/06/07 APPR: WMSCHANG 2006/06/08	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	2 PLACES ± 0.25 ± ---	1 PLACE ± 0.25 ± ---	ANGULAR ± 3 °	DRAWN BY KEN LEE	DATE 2006/03/22	TITLE PCI EXPRESS X16 (164CKT) VERT DIP WITH BOARD LOCK (LEAD FREE VERSION)		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					APPROVED BY ALLEN LIN	DATE 2006/03/22	MOLEX INCORPORATED		
		SEE TABLE					MATERIAL NO.	DOCUMENT NO. SD-87715-211	SHEET NO. 1 OF 3		

9 8 7 6 5 4 3 2 1



PIN #1 IDENTIFIED BY SQUARE ANNULAR RING

NOTES:

1. MATERIALS: HOUSING - HIGH TEMPERATURE THERMOPLASTIC, UL 94-V0 (BLACK)  
TERMINAL - COPPER ALLOY
2. PLATING: CONTACT AREA - SEE TABLE IN SHEET 2 FOR PLATING OPTION  
SOLDER TAILS - SEE TABLE IN SHEET 2 FOR PLATING OPTION  
UNDERPLATING - 50µ (1.27µm) MIN. NICKEL

RECOMMENDED P.C.B. PATTERN (CONNECTOR SIDE)

THICKNESS: 1.57mm FOR 2.54mm SOLDER TAIL LENGTH  
2.35mm FOR 3.00mm SOLDER TAIL LENGTH

11. PRODUCT SPECIFICATION REFER TO PS-87715-200.
12. PACKAGE SPECIFICATION REFER TO PK-87715-205.
13. TEST SUMMARY REFER TO TS-87715-211.
14. LEAD FREE AND RoHS COMPLIANT PRODUCT.

3. MOLEX LOGO - TO BE LASER-MARKED
4. DATE CODE - TO BE LASER-MARKED
5. CHAMFER EDGES OF EDGE CARD MUST BE FREE OF CUTTING BURRS
6. THE HORIZONTAL AXIS FOR THE FOOTPRINT HOLE PATTERN IS ESTABLISHED BY A LINE THROUGH THE CENTRE OF THE TWO Ø2.35 HOLES. THE VERTICAL AXIS IS 90° TO THE HORIZONTAL AXIS, THROUGH THE CENTRE OF DATUM Z
7. FEATURES DESIGNED TO FUNCTIONALLY MATE/MOUNT (SLIP FIT) PER THE RECOMMENDED EDGE CARD AND PCB PATTERN.
8. PINS FOR HOT PLUG PRESENCE DETECTION. NO TIE BAR PERMITTED FROM CARD EDGE TO LEADING EDGE OF PAD FOR THE HOT PLUG PINS.
9. PIN #1 IDENTIFIER
10. KEEP OUT AREA - NO EXTERNAL COMPONENTS ALLOWED ON PCB SURFACE

SEE SHEET 1	DESCRIPTION
EC NO: SH2006-0769	2006/05/30
DRWN: ALLIN	2006/06/07
CHKD:	
APPR: WISCHANG	2006/06/08
REV	

QUALITY SYMBOLS	▽=0
	◻=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm INCH
4 PLACES	± --- ± ---
3 PLACES	± --- ± ---
2 PLACES	± 0.25 ± ---
1 PLACE	± 0.25 ± ---
ANGULAR ± 3°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE MM ONLY	
DRAWN BY	DATE
KEN LEE	2006/03/22
CHECKED BY	DATE
ALLEN LIN	2006/03/22
APPROVED BY	DATE
WILSON CHANG	2006/03/22
MATERIAL NO.	
SEE TABLE	
SIZE	
A3	

SCALE	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
TITLE		
PCI EXPRESS X16 (164CKT) VERT DIP WITH BOARD LOCK (LEAD FREE VERSION)		
MOLEX MOLEX INCORPORATED		
DOCUMENT NO.		SHEET NO.
SD-87715-211		2 OF 3
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

10 9 8 7 6 5 4 3 2 1

F F

E E

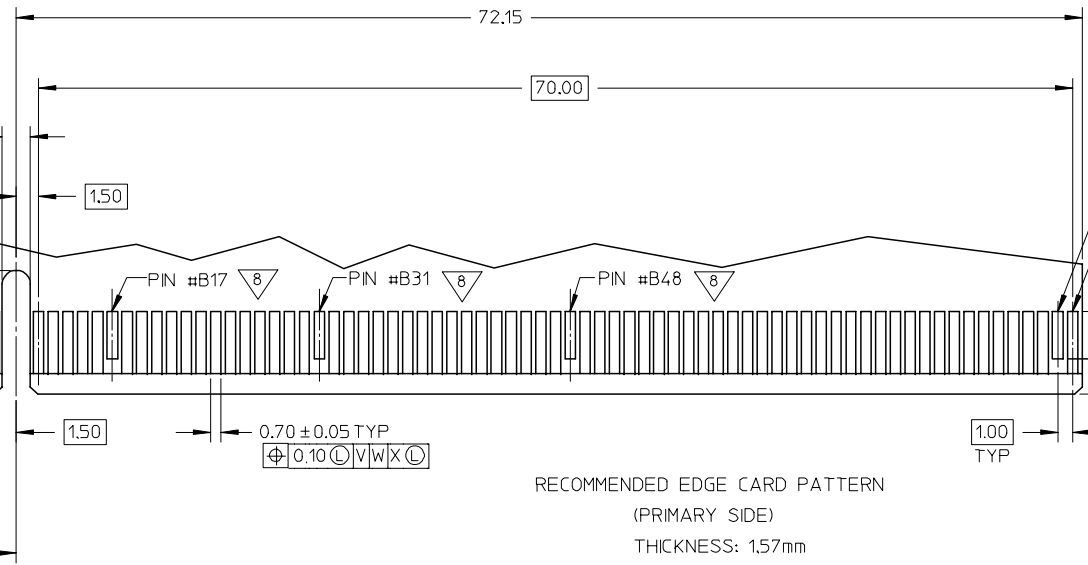
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C C

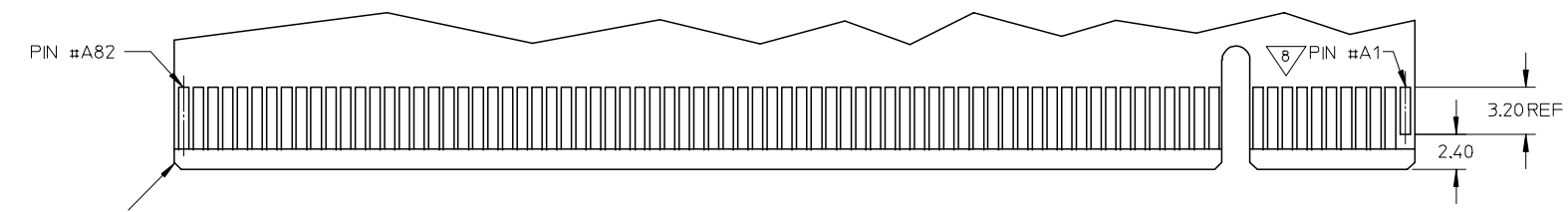
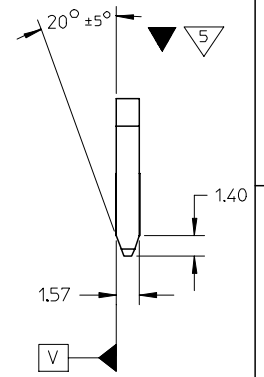
B B

A A

9 8 7 6 5 4 3 2 1



RECOMMENDED EDGE CARD PATTERN  
(PRIMARY SIDE)  
THICKNESS: 1.57mm



RECOMMENDED EDGE CARD PATTERN  
(SECONDARY SIDE)  
THICKNESS: 1.57mm

SEE SHEET 1	DESCRIPTION
EC NO: SH2006-0769	2006/05/30
DRWN: ALLIN	2006/06/07
CHKD:	
APPR: WMSCHANG	2006/06/08
REV	

QUALITY SYMBOLS	▽=0
	∇=0

GENERAL TOLERANCES (UNLESS SPECIFIED)	mm	INCH
	4 PLACES ± ---	± ---
	3 PLACES ± ---	± ---
	2 PLACES ± 0.25	± ---
	1 PLACE ± 0.25	± ---
	ANGULAR ± 3°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY			METRIC	
DRAWN BY	DATE	TITLE		
KEN LEE	2006/03/22	PCI EXPRESS X16 (164CKT) VERT DIP WITH BOARD LOCK (LEAD FREE VERSION)		
CHECKED BY	DATE	MOLEX INCORPORATED		
ALLEN LIN	2006/03/22	MOLEX INCORPORATED		
APPROVED BY	DATE	DOCUMENT NO.		
WILSON CHANG	2006/03/22	SD-87715-211		
MATERIAL NO.		DOCUMENT NO.		SHEET NO.
				3 OF 3
SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
A3	SEE TABLE			